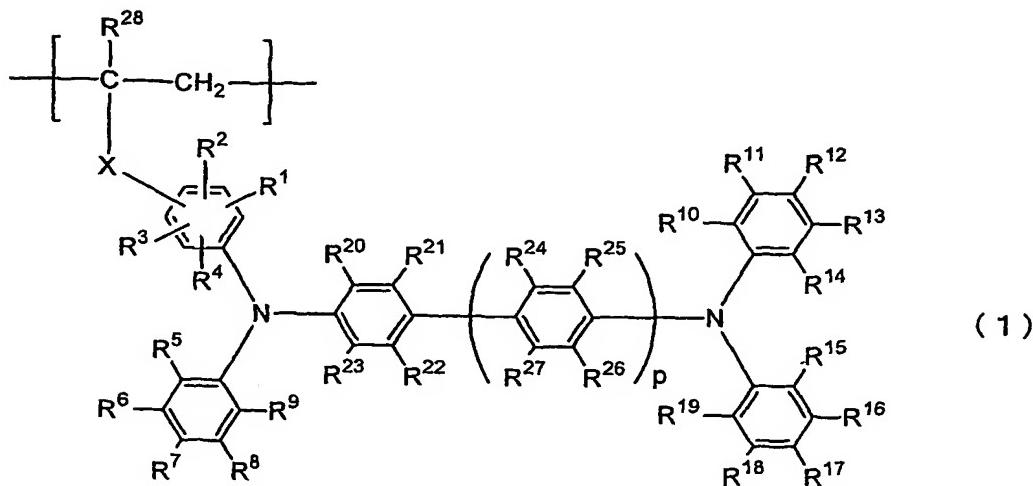


CLAIMS

1. A phosphorescent polymer compound comprising a phosphorescent monomer unit and a monomer unit represented by the formula (1):

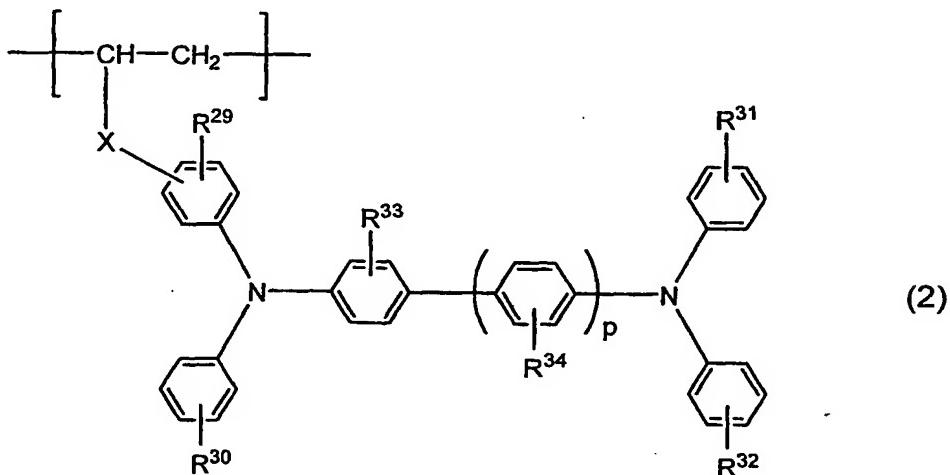
5



wherein R¹ to R²⁷ independently represent a hydrogen atom, a halogen atom, a cyano group, an amino group, an alkyl group having 1 to 6 carbon atoms, or an alkoxy group having 1 to 6 carbon atoms, groups of R¹ to R¹⁹ connecting to adjacent carbon atoms in the same phenyl group may be bonded together to form a condensed ring; R²⁸ represents a hydrogen atom or an alkyl group having 1 to 6 carbon atoms; X represents a single bond, an oxygen atom (-O-), a sulfur atom (-S-), -SO-, -SO₂-, -NR- (in which R represents a hydrogen atom, an alkyl group having 1 to 4 carbon atoms, or a phenyl group), -CO-, or a divalent organic group having 1 to 20 carbon atoms, the organic group may be substituted by atom or group selected from the group consisting of an oxygen atom (-O-), a sulfur atom (-S-), -SO-, -SO₂-, -NR- (in which R represents a hydrogen atom, an alkyl group having 1 to 4 carbon atoms, or a phenyl

group), and -CO-; and p is 0 or 1.

2. The phosphorescent polymer compound according to claim 1, comprising the phosphorescent monomer unit and a monomer unit
5 represented by the formula (2):



wherein R²⁹ to R³⁴ independently represent a hydrogen atom, an alkyl group having 1 to 6 carbon atoms, or an alkoxy group having 1 to 6 carbon atoms; X represents a single bond, an oxygen atom (-O-), a sulfur atom (-S-), -SO-, -SO₂-, -NR- (in which R represents a hydrogen atom, an alkyl group having 1 to 4 carbon atoms, or a phenyl group), -CO-, or a divalent organic group having 1 to 20 carbon atoms, the organic group consisting of an oxygen atom (-O-), a sulfur atom (-S-), -SO-, -SO₂-, -NR- (in which R represents a hydrogen atom, an alkyl group having 1 to 4 carbon atoms, or a phenyl group), and -CO-; and p is 0 or 1.

3. The phosphorescent polymer compound according to claim 1 or 2,
20 further comprising an electron transporting monomer unit.

4. The phosphorescent polymer compound according to claim 3, wherein the electron transporting moiety in the electron transporting monomer unit is selected from the group consisting of an oxadiazole derivative, a triazole derivative, a triazine derivative, a 5 benzoxazole derivative, an imidazole derivative and a quinolinol derivative metal complex.

5. The phosphorescent polymer compound according to claim 1 or 2, wherein the phosphorescent monomer unit comprises a polymerizable 10 group and a phosphorescent moiety, and the phosphorescent moiety is contained in a side chain of the phosphorescent polymer.

6. The phosphorescent polymer compound according to claim 1 or 2, wherein the phosphorescent monomer unit comprises a transition metal 15 complex.

7. An organic light emitting device comprising one or more polymer layers interposed between an anode and a cathode, wherein at least one of the polymer layers comprises the phosphorescent polymer 20 compound according to any one of claims 1 to 6.

8. The organic light emitting device according to claim 7, comprising an anode subjected to UV ozone irradiation treatment or high-frequency plasma treatment.

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9. The organic light emitting device according to claim 8, wherein the high-frequency plasma treatment is performed by using a gas containing an organic substance.

30 10. The organic light emitting device according to claim 9, wherein the gas containing an organic substance contains at least one of

fluorocarbon and methane.

11. The organic light emitting device according to claim 8, wherein
the high-frequency plasma treatment is performed by using a gas
5 containing at least one of oxygen and argon.